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SPECIAL ARTICLES

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A. S. LEITCH, SHELDONS, LIMITED

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Industrial Dust

BY A. S. LEITCH, SHELDONS, LIMITED, TORONTO.

Read at Annual Meeting of Ontario Safety League, Toronto, April 13th, 14th and 15th.

THE presence of dust in the atmosphere is practically universal. Its effects are far reaching and extend into the upper regions of the world's atmosphereic envelope. Light and humidity are affected by its presence, as well as the comfort, convenience and cost of human existence. Every day "Dust" collects a heavy toll from humanity in the form of money and life. It has been stated by eminent surgeons that the lungs of people who live in the congested sections of our large cities are a dull grey colour, whereas the lungs of those who live in open sections, such as the country or in the mountains, are a brilliant red, and that this difference in colour can only be accounted for by the greater amount of dust present in the air of our cities. Undoubtedly this high dust content is a serious menace to the lives of our citizens, but it is the workers employed in industries where the process of manufacture produces harmful dusts, vapours, fumes or gases, who are the greatest sufferers and, therefore, from a "Safety First" standpoint the subject "Industrial Dust" offers a very fertile field for investigation. The object, therefore, of this paper is to call to your attention.

1st. The various harmful gases, fumes, vapours and dusts produced by industrial processes.

2nd. The physiological effect which these dusts have on the human organism.

3rd. Present day methods by which they can be eliminated and healthy conditions maintained in the workrooms.

The various dusts to which industrial workers are exposed may be classified under the following headings:—

1. Mineral.
2. Metallic.
3. Vegetable.
4. Animal.
5. Combination of two or more of the above.

In describing the physiological effects of these industrial dusts we will disregard the above classification and consider the different forms of these dusts according to their effects as follows:—

1. Irritating dusts which have only a mechanical action and act directly upon the part most exposed.

2. Poisonous dusts which, when entering the system, cause a general poisoning, or have an affinity for certain parts of the body, such as the blood, bones and the nervous system.

3. Infected dust which carries with it disease germs.

The action of irritating dusts found in metal grinding industries such as iron, steel, brass, copper and in stone-cutting, granite surfacing, emery grinding, etc., is chiefly local, affecting those parts of the body directly exposed such as the eyes, nose, throat and skin. The sharp particles may enter the unprotected eye of the workman and cause an injury, the extent of which depends upon the amount of material entering the eye and the force with which it enters. The thin, transparent membrane covering the eye and lining the lid becomes red and inflamed, there will be pain, great sensitiveness to light, and an increased amount of tears. If neglected, infection may occur by dust entering the eye or from attempts to remove the particle of dust with unclean rag or tooth pick. The eyelids will be swollen and stick together and the eye may be permanently injured.

Should the sharp metal particles be inhaled the lining membrane of the nose may become affected and show redness and swelling, followed by an inflamed condition of the skin around the nostrils. Later chronic nasal catarrh often develops also causing the loss of the sense of smell. Not only is the lining membrane of the nose affected, but also that lining the tube which extends to the ear. This inflammation affects the middle ear and causes an unpleasant sensation of ringing in the ears, followed by a considerable loss of hearing. This irritating dust may pass beyond the nose, throat and bronchial tubes and enter the lungs, thereby causing a chronic inflammation and rendering the worker more susceptible to tuberculosis.

Other irritating dusts such as hemp, flax, cotton, jute, tobacco, may cause keen inflammation of the eyes, nose, throat, lungs or skin. That of furs, feathers and hair may likewise have an irritating effect and in addition, carry disease germs with which the worker may become infected.

Corrosive dust, such as soda and potash, used in the manufacture of soaps and bleaching powders, cause inflammation and ulceration of the skin and other parts exposed. Poisonous dust, such as lead, arsenic, salts of mercury, the most common of which is lead dust, to which the worker is exposed in numerous trades, usually enters the system by

being inhaled or through the stomach by eating food contaminated by lead laden hands. When entering the stomach, the lead, after undergoing changes, becomes absorbed and enters the blood, thus being carried to all parts of the system. The tissues chiefly affected are the arteries, nerves, brain, muscle and also the blood.

Dangerous fumes, vapours and gases usually show their effects immediately, on account of the rapidity with which they enter the blood and are carried to all parts of the body. The symptoms vary according to the amount inhaled. These fumes may be classified as follows:—

1. Irritating fumes and vapours which act locally upon the eye, mucous membrane of the nose, throat, larynx, bronchial tubes and the lungs, such as ammonia, chlorine, nitric and sulphuric acid.

2. Poisonous, intoxicating fumes such as carbon monoxide, benzol, wood alcohol, carbon di-sulphide, benzene, aniline, and lead; which affect the heart, blood and circulation, the nervous system and digestive organs.

3. Others, such as wood alcohol, affecting the optic nerve and causing blindness, chronic acid which causes ulceration and perforation of the partition separating the nostrils, phosphorus which affects the jaw bones, and mercury which particularly affects the teeth and lower jaw.

Irritating fumes, such as ammonia, cause inflammation of the transparent membrane covering the eye. The fumes of nitric acid have been known to cause intense inflammation of the mucous membrane of the bronchial tubes and later, when the worker has apparently recovered from the effects, inflammation of the lungs appears, causing death in a few hours.

Intoxicating fumes, such as carbon di-sulphide, benzol and benzene, causes headache, dizziness, nausea and weakness in the legs.

Poison fumes, such as aniline may cause attacks varying in severity with the amount inhaled. Those unaccustomed to the fumes are particularly susceptible. In mild attacks there will be headaches, dizziness, pain in the eyes, a feeling of fulness in the head and great weakness in the knees. The speech is slow and uncertain which, with the staggering walk, gives the appearance of drunkenness. The worker's face is pale at first, later blue, and he breathes with difficulty. If treated at this time by inhaling fresh air and heart stimulants, he recovers in a couple of days, but should the worker be so unfortunate as to fall and be unnoticed in some secluded part of the plant, he will continue to absorb the aniline fumes and death will occur very shortly. Very frequently the worker apparently recovers, returns home, and during the night or the following day the symptoms recur, the pulse becomes feeble, breathing is slow and difficult, and unconsciousness will occur followed by death.

Lead fumes arising from improperly hooded pots in the composing room of the printing industry frequently cause anaemia and lead poisoning among the printers.

Wood alcohol is used frequently in the preparation of varnish and shellac and in the manufacture of hats, artificial flowers and dyes. In poisoning from the fumes, the worker suffers from cramps, nausea headache and dizziness. His flesh is tender to the touch, his temperature is low and he complains of great weakness. The symptoms very much resemble those of ptomaine poisoning. In addition, the sight is affected varying in degree from dimness of vision to complete blindness. In fatal cases, death occurs from paralysis of the heart. Wood alcohol produces a particularly harmful effect upon the optic nerve, causing blindness even in mild cases of poison.

Mercurial vapours are met with in the manufacture of several scientific instruments, and mercurial salts. While mercury is one of the heaviest of metals it is known to volatilize or evaporate at ordinary temperatures. For this reason, all operations should be performed under hoods, as these fumes when inhaled affect the blood and nervous system, particularly the teeth, gums and jaw bone.

In order to protect the workman from the harmful effects of these various forms of industrial dust it is first necessary to collect them in such a manner as to prevent their escape into the general atmosphere of the work-room, and second, to deliver into the room a continuous supply of pure, fresh air at the proper temperature and in volume equal to that extracted.

Air is the common medium employed to collect and carry off this dust and both natural and mechanical circulation is in general use.

There are a few instances where gases can be carried off by natural circulation, such as in the case of a vat, tank or melting pot, where the temperature of the vapours and fumes is much higher than that of the outside air, due to the difference in temperature between the warm air in the pipe and the air surrounding it.

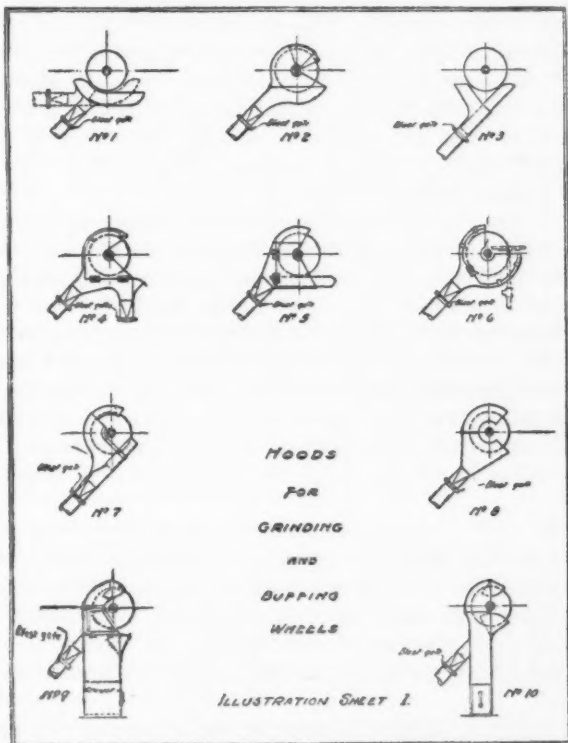
The natural gravity system has the following objections:—

1. Little or no circulation is established when the heat is first turned on. Take, for instance, the case of a blacksmith's forge, it will be found that when starting in the morning and while the fire is burning up the heavy smoke will refuse to rise up the cold chimney and will spread out under the hood into the room, in fact, completely fill the room, before the cold air in the flue has been sufficiently heated to start a circulation which will carry up these dense fumes.

2. The action of a gravity system is seriously affected by the direction and force of the wind. We are familiar with instances where a natural draft flue will give particularly good results on certain days and on other days will be worse than useless.

3. In buildings where exhaust fans are in operation a gravity flue is of little use as the action of the exhaust fan tends to create a down draft into the building.

The removal of waste material from machines in industrial plants by means of fans or blowers has been in general use for about eighty-five years. It is the most efficient and satisfactory method known. There are three general methods in practice by means of which the suction by



the exhaust fan is applied to remove the objectionable dust. These are the downward, lateral, and upward movement of air currents.

With the downward system the hoods are located at a point lower than where the dust is produced. This, of course, is only applicable to the removal of heavy dusts, gases, etc., such as shavings, sawdust, chromate of lead, barium sulphate, paris green, silica, hydrated carbon of lead, and most pigments and salts. This method is also very successfully used in connection with the filling of boxes, barrels or kegs.

Lateral systems are those with which the hoods are placed at the sides or at the front or back of the machines producing the objectionable dust and have been used successfully in the carrying off of nitric acid fumes and in places where hoods cannot be placed above the vat. This method is also frequently used in connection with vats for pickling before galvanizing and plating.

By the upward system, which is the most common in use, is meant one where the hood or extraction member is located above the machine, vat or tank to be ventilated. This system is preferable where the dust fumes or gases are lighter than the air and, therefore, have a tendency to rise. It should be used for the removal of coal gas, ammonia, hydrocyanic acid, carbon monoxide, steam, fumes of methyl alcohol, nitric oxides, hydrochloric acid, and the vapours which readily rise from vessels containing lead, arsenic, antimony or zinc when the same are heated to a certain degree.

When fumes or vapours of inflammable liquids such as methyl, alcohol, benzine, or ether, are to be removed by exhaust system, belt driven fans with copper or brass blades must be used and under no circumstance should a motor driven fan be installed where the motor or wiring system is in direct path of the material to be removed.

The design, construction and installation of a proper exhaust system can only be successfully handled by men who have specialized in this class of work. In the past this work has been left too much in the hands of tinsmiths, who probably have had no experience along this line but whose usual occupation is putting on tin roofs or making eave-troughs.

To make a thoroughly good and efficient hood is an art in itself. It requires the best skill of an experienced blow pipe man. Of course almost anything can be made work after a fashion, but to construct a hood that does clean work and does not require an excessive velocity or volume of air, is something known to but a few mechanics, very few of whom are outside the employ of those making a specialty of blow-pipe work.

Hoods are never carried in stock by any one, there being such a variety of shapes and sizes that it is always advisable to build the hood on the job.

A governing principle for the design of hoods used for collecting refuse from machines is to so shape the hood that the knives, saws or beaters will throw the refuse directly to a point where it will be caught by the high velocity air.

A hood is really nothing more nor less than a trap, its object being to prevent the escape of the dust or waste material and direct it to a point where the highest velocity of the branch pipe can reach it. If the

hood fails to do this it is not properly designed for the particular work required of it and in order to make up for this faulty design it will be necessary for the fan to handle a greater volume at a higher velocity and, of course, with an increased power consumption.

Hoods for grinding, polishing and buffing lathes have to be specially designed to suit the character of the work for which the wheels are used. A hood suited to one class of work on a good type of lathe would be wholly unsuited to some other class of work on exactly the same lathe. For instance, the grinding of some things can be done on the top of the wheel while others are more easily ground at the centre of the wheel or on the underside.

On illustration sheet No. 1 are shown different designs of this type of hood, each having its special application according to the class of work for which the wheel is used.

Speaking generally, the more a grinding wheel can be enclosed, the less dust will escape from the operation, but with certain classes of work the wheel is so completely used as to make it almost impossible to do much more than run an exhaust pipe to it, something similar to hood shown in Fig. No. 3, in which case the exhaust action is utilized to carry away as much dust as possible from the immediate vicinity of the worker. Cases of this kind are generally the result of an insufficient number of grinders and by installing a few extra machines it will be found that all the wheels can be properly hooded.

On illustration sheet No. 2 are shown some hoods designed for use with woodworking machines. The hood over the upper knives has a mouth at the bottom several times the area of the pipe, consequently it has very little lifting power at the mouth. Immediately above the apron around the knives the mouth is drawn in on all four sides so as to reduce the area to about equal the pipe area. It is also drawn back at a considerable angle in the direction the shavings fall from the knives. See Hood No. 4. The shavings are thrown at once into the contracted area where the velocity is the highest and being once set in motion it is a simple matter to keep them moving.

The hood to the bottom knives of a planer is little more than a shallow hopper with a rectangular opening in the bottom connecting with the exhaust pipe. The end of the pipe is usually left open to prevent clogging up, as otherwise, if the refuse should bridge over the opening in the bottom of the hopper, it would shut off all circulation and the pipe would then become dead until cleaned out.

The hoods to the side head of a planer are similar to the side head sticker hood in Fig. 2. These should be fitted with ball and socket joints.

To be Continued.

The Responsibilities of Medical Health Officers

BY HON. DR. WM. F. ROBERTS,
Minister of Health, New Brunswick.

(Address before Association of Medical Health Officers of Nova Scotia, at Kentville
July 6th, 1920.)

MEDICAL Health Officers, or, as these officers are more generally called, Medical Officers of Health, constitute about the oldest part, and, certainly one of the most important parts, of the modern system of Public Health Administration.

It is a somewhat difficult task to describe the duties of these officers, for although the name of the office is identical or nearly synonymous everywhere, the position and status of these officials differ widely in the different provinces and states. In England, where, I think, the office was first instituted, or, at any rate, first fully and efficiently developed, the part played by them is of first-rate importance. Upon them is laid, practically, the whole duty of the local administration of the laws relating to Public Health, and their powers are varied and ample. The practice in England, "The mother of modern Public Health Administration," is in considerable contrast to that which obtains very generally throughout the United States and Canada. With the English the laws relating to Public Health are looked upon with much the same spirit, and administered with much the same vigour, as are the other laws and regulations relating to public and private order and justice. In a word the "police" powers of the Sanitary authority are made much more use of, than on the American continent, speaking broadly. With us Public Health matters, more especially of recent years, have been closely, and some would say, inextricably mixed up with philanthropic and altruistic views and sentiment, nurtured by a hundred bodies, independent and voluntary, each devoted to some special praiseworthy object. It is unnecessary to say that these objects are not minimized by their exponents and promoters. Medical Health officers, therefore, and indeed all prominently connected in an official way with Public Health, have become, perhaps perforce, largely propagandists, and the "police" functions of Sanitary law, have also probably perforce, assumed a subordinate place. The appeal to law with us is a "*dernier ressort*" and chief reliance is placed upon moral suasion and education. It is proper to say that in a considerable number of large cities, especially

in the United States, the two principles of Health Administration are acted upon with fairly equal vigour, so that, although altruism and hygienic education then reach their very extreme, at the same time, "police" power is exercised very freely.

It would be improper for me, in this short note, to enter at large upon a discussion relative to the merits of each principle. Just as is the case with so many of the origins of our other authorities a multitude of good reasons could be adduced to sustain either principle, and it is fairly certain that a combination of both, carried out with tact as respects the prevailing practice in England, and with reason and the absence of fanaticism regarding the principle so popular with us, would represent the ideal practice in Health Administration.

Whatever principle or combination be adopted, it is most evident that in it the Medical Health officer plays a most vital role. He is the man close to the people. He is the authority upon which we must rely for the knowledge of local conditions, local customs, and, above all, local prejudices. With him often will rest the decision when to act, how to act, and how far to go. He must never forget the profound maxim, "That all things are lawful, but all things are not expedient." He must never let Valour run away with Discretion, and, at the same time, must not think that Discretion can cover up and justify a course of action marked by irresolution, hesitancy, a constant attention to popularity, or by catering, for one moment, to wealth, social position, political influence, race, creed or colour. Such deference is, indeed, the complete and, at the same time, irrevocable condemnation and ruin of all Public Health measures in a community. Nothing brings them more quickly and justly into public contempt and no amount of subsequent impartial action will suffice to wash away, for a generation, the stigma so contracted.

Viewing the subject broadly it would seem that, with us, two opposing courses or schools govern in the matter of the Medical Health officer, as respects usefulness and efficiency of Health Administration. These, for convenience, can be expressed as Quantity and Quality.

The one school holds that this officer be thickly stationed, in order that he be easily found, and ready to act upon any emergency, for emergency, and not routine, be it remembered, makes up the normal life of Public Health officers, almost of all grades. A close, constant supervision is, also, only attainable under such conditions. There is very much, indeed, to be said for such contention. By referring to this school as the exponents of "quantity," rather than "quality," it is not meant, for a moment, that the actual quality of these closely set officials is in any degree inferior, other things being equal to that of the sparsely placed men. "Quality" is here used, solely, to designate the amount

of time and attention that can be devoted by these officials to their duties, and to the place the Public Health will naturally occupy in their thoughts and activities. For it is very evident that, in our relatively poor and sparsely settled country, medical men, wholly devoted to this work, and in large numbers, is a financial impossibility. Hence the trite and threadbare discussion respecting the virtues of the "part-time" and "full-time" system. Certain it is that Public Health work has become a "specialty," and that a "specialty" cannot, under ordinary circumstances, be carried on successfully as a minor occupation. It must be the major one or nothing. I will not press the other notable objection respecting the difficulty and embarrassment the "part-time" man meets in connection with his work, in dealing with his own patients and those of his colleagues and, perhaps, rivals. Too much, I think, has been made of this, but, of course, it carries some weight.

The most decisive argument for the sparsely located Health officer is, of course, his devotion to one thing—that thing being Public Health. In spite of himself he does, indeed, become a specialist, and if to this education from experience he has the added instruction from college and laboratory, he soon blossoms into the most pronounced and exclusive specialist of all the professions. But, because of his infrequency, his personal visits can be but "few and far between" and even these few of but fleeting duration. Under such a system supplementary aid is imperative, especially in rural districts, and it is to this supplementary aid we look in New Brunswick, where the "full-time" plan has been adopted.

These aids consist of the Sub-District Board of Health and its staff. We place these Boards under the permanent and ex-officio chairmanship of the Medical Health officer, and the staffs under his direction and control. So far as Public Health proper is concerned apart from the Medical School Inspection and the collection of Vital Statistics, the essential elements of these staffs are the Secretary of the Board and the Sanitary Inspectors. The theory which mainly actuated us was, that there are numberless things to be done in Public Health work that a layman, under proper guidance, can do equally well as the medical man, and, of course, presumably, at a substantially smaller cost. He obtains the "particulars" of notifiable diseases; he placards; he quarantines; he disinfects; he makes stated and regular inspections for nuisances and so forth; he attends to "complaints"; he posts notices, distributes cards; he is the cicerone of the Medical Health Officer when the latter comes to his "area"; and perhaps not least of his functions, he is the "guide, philosopher and friend" of his local associates in the matter of Public Health, and a constant exponent and expounder of the hygienic life and of the Public Health Administration. The latter

descriptive phrases may be, and probably are, idyllic at present, but we look forward to their becoming material and most pregnant, as well as most common-place truths.

At present, these officials are a novelty to the people, especially in rural localities, and are looked upon with "mixed" feelings by them. The "mixture" is largely impregnated with suspicion, and is not entirely devoid of contempt. But as it is Tim's glory, among other good works, "to calm contending Kings" and "to bring truth to light", so it shall be with the Sanitary Inspector—he shall come into his own, to the untold betterment of the public.

To enumerate the duties of the Medical Health officer with us in New Brunswick would be to set forth a lengthy and thrice-told tale. He is, in a word, the embodiment of the Public Health Act, and the Regulations thereunder. All that concerns the Health of the Public comes under his notice and is his business, and to him the Chief Executive officer looks for the doing of things. To control epidemic outbreaks yet is unfortunately his most engrossing task, and the one disease which still maintains its old precedence of this kind, is needless to say, small-pox. But the time is surely coming when this pestilent nuisance shall cease from troubling, and then the Medical Health officer will, like the Sanitary Inspector, really come into his own. The repression of contagious diseases, indeed, in all its varied phases, has been the fundamental work of the Medical officer and of the Public Health authority ever since the inception of the office and the institution, but it is destined to lose its pre-eminent position. It has already been recognized that Preventive Medicine, is or should be, concerned with higher and even more beneficial ideals, did opportunity permit—and opportunity rests upon the practical abolition of the graver communicable diseases, an abolition as certain as that of the slave-trade and duelling.

A chief function of the Medical Health officer is, undoubtedly, to be the principal channel of hygienic education, and to achieve that, he needs to be possessed of the faculty of public speaking and some facility with the pen. Excessive youth is a hindrance to his work, rather than otherwise. In the present state of partial prejudice against, and aloofness from Public Health measures, the presentation of the necessity of these, by a young man, no matter how well done, is handicapped by the very paucity of his years. It accentuates and seems to confirm the popular notion that all he says is of but yesterday, and will change to-morrow—in a word—that he is merely a faddist—intoxicated, not indeed, "with his own verbosity" but by the exuberance of youth.

And, as in every other specialty of medicine, I think this also holds true, that the Medical Health officer should have some years experience in the practice of medicine, before entering the preventive field. I will

not pause upon this—only to say that the deepest truths of the service of Health and its preservation can only be properly absorbed by a repeated attendance at the bed-side.

I have diverged largely from my proper theme—the *duties* of the Medical Health Officer, and said far more respecting his qualifications for duty than upon what he is actually expected to perform and I submit, there is reason for this. In the first place, his qualifications are of more moment than his duties, for unless he is qualified for his task, his work in what-ever direction it may take him, will be of mediocre quality. In addition, of all public officials, I think the Medical Health Officer should be the least restricted as regards his activity. Precise and pedantic rules governing his motions and various proceedings are here, in my opinion, not only unnecessary but inherently vicious. More especially is this true of the man devoting his whole energy to this work. He is, most of the time alone, so far as his colleagues and his official superiors are concerned. He resembles, in this respect, the country doctor, who if he be anything, must be self-reliant and capable of acting with accessories falling far short of the up-to-date and the ideal. It is true that the Medical Health Officer is generally, though not always, within reach of the telephone, but I think, there is no one here listening to me, that is not already acquainted with that useful instrument's power for promoting misunderstanding, wrong information, impetuous statement and confusion of the intellect. Besides, it is not fair to him, to have him think he is but the vessel or vehicle for transmitting his Executive Officer's knowledge and wisdom. Nothing dwarfs good service more effectively than to be made slavishly dependent upon another's initiative. Routine and the doing of the established and "proper" thing has been for ages, the capital charge brought against all governmental officials; it has been a charge mostly founded upon illusion and often maintained by ignorance. But the Medical Health Officer, while of course properly amenable to guidance and control, should be given as free a hand as possible, and the chief measure of the Executive's own ability and fitness is his knowledge when and upon whom to confer this latitude.

I do not think I need to pursue this subject further. That you have invited me, so late a comer into the field of Preventive Medicine, to say something upon so important a topic is a high honor, an honor and privilege second only to that conferred upon me, when it was permitted me to enter this field, and to attempt something and, perhaps, to have already achieved a little upon the most beneficent stage of action that can employ one's mind and activities.

Why were Half of our Young Men not Fit for the Fighting Line

G. R. CRUIKSHANK, B.A., M.D.

I HAVE analyzed and tabulated one thousand consecutive cases examined for the military draft in an agricultural and saw-mill county.

Five hundred and sixty-four were placed in (A) and four hundred and thirty-six in other than (A).

It will be noticed in the table that five hundred and two disabilities are given which means that sixty-six had one or more serious disabilities. A number had several defects, but the one that influenced the classification is listed:

Defective feet	75
Trauma	48
Tuberculosis	46
Hernia	45
Rheumatism	34
Goitre Exophthalmic	33
Valvular disease of the heart	32
Rapid pulse	26
General debility	21
Varix	20
Disordered action of heart	19
Undersize	16
Epilepsy	11
Defective vision	10
Deafness	7
Goitre, simple	7
Asthma	7
Syphilis	6
Otitis media	6
Syncope	4
Mental defective	4
Psoriasis	3
Tonsillitis, acute	3
Cerebro spinal fever	3

Paralysis	3
Defective speech	2
Urethritis	2
Endocarditis	2
Orchitis	1
Fistula	1
Renalcalculus	1
Total	562

It must be conceded that very little could have been done by health authorities to prevent these disabilities.

Out of one thousand, seventy-five were rejected on account of defective feet, most of them probably congenital. It is possible if these defects were noted early that suitable training of the feet might have helped.

A number were due to improper shoes. That forty-eight were disabled by the effects of injuries seems too large a percentage even for a saw-mill county.

The most remarkable thing in the table is the number of cases of goitre—thirty-three cases of Graves disease and seven cases of simple goitre. A number of cases of goitre, with normal pulse and no other bad symptoms, were placed in (A). That three decimal three per cent. of the young men of the county of Lambton have enlarged thyroids with toxic symptoms is a serious matter. Can someone tell us for a certainty the cause of this complaint?

Under the head of rheumatism and included in the table are not only the cases of acute articular arthritis, but also a number of disabilities usually known as rheumatism. Probably sixty per cent. of the candidates gave a history of rheumatism which of course included all kinds of aches and pains. However, three decimal four per cent. had enough of these troubles to be placed in other than (A). Thirty-two had valvular disease of the heart, so that these two classes together would indicate that probably six per cent. of the young men of the county suffered from rheumatic fever. This is remarkable, and should surely impress upon us the necessity for care of infection in a disease so dangerous.

Forty-six were excluded for tuberculosis, most of them incipient and unsuspected by the applicant. Twenty-six were kept out of (A) with rapid pulses, the cause of which we were unable to locate. Probably these should be divided between hyper thyroidism and tuberculosis, and there were twenty-one cases of general debility.

It may be safely assumed that five per cent. of the young men of the county of Lambton are tubercular, although no doubt many of them will completely recover with ordinary good living. Still it seems reasonable that the health authorities should find out all who were rejected for this in the Dominion and take steps to help them.

It may be noted that only six per thousand were excluded for syphilis and three per cent. for gonorrhoea. This would indicate less than one per cent. venereal before enlistment, but this is not so—many with specific urethritis were placed in (A) because we concluded that they would be well before drafted or quickly cured after; and, of course, we did not make Wasserman's tests.

We may congratulate the county that only seven in one thousand were hard of hearing.

It must be borne in mind that already two battalions were recruited in this county.

On the whole, I think very much good information may be obtained by the health authorities from the medical history sheets all over the Dominion.

Our Safety Week in the Border Cities and Its Successes

BY CAPT. JACK ROBBINS,
Border Cities Safety Council, Windsor

Read at the Annual Meeting of the Ontario Safety League, Toronto,
April 13th, 14th, and 15th.

Mr. Chairman, Ladies and Gentlemen:

I am very sorry indeed that Capt. Robbins is not able to be here to read his paper on "Our Safety Week in the Border Cities and its Success." Capt. Robbins is secretary of the Border Cities Safety Council, and we believe we have the best secretary in the country.

In his absence I shall try to take his place and tell you of our efforts towards promoting safety in our part of the Province.

It is impossible to tell of our Safety Week without first telling of the formation of the local council.

The local council was really the outgrowth of a meeting of the manufacturers with a member of the Compensation Board. At that meeting the problem of the reduction of the cost of accidents in Ontario was discussed and the educational feature of accident prevention emphasized.

Shortly after that meeting twenty-five plants sent representatives to a meeting which was called for the purpose of organizing a Safety and Sanitation Committee of the manufacturer' section of the Border Chamber of Commerce. A chairman and secretary were elected at that meeting, and it was decided to hold monthly round table meetings of superintendents and foremen.

The first round table meeting was arranged for April 24th, 1919, and Mr. C. W. Price, general manager of the National Safety Council, was the speaker. Mr. Price also spoke at the Chamber of Commerce luncheon that day, and what he told of the paid secretary plan sounded so good that the manufacturers at once took it up and arranged to form a local council instead of merely a committee.

Capt. Robbins was secured as the secretary. He was sent on a tour of the cities of the United States who then had paid secretaries. He was gone two weeks, and when he got back he was so enthusiastic regarding the possibilities of holding a real Safety Week in the Border Cities that plans were at once made for the holding of such a week.

In arranging for the week it was not so much the idea of preventing accidents for that week only as it was to awaken the residents to the

possibilities of organizing for safety and carrying out the program for the entire year.

Just as industrial safety must be "sold" to the plant managers, superintendents, foremen and workmen, so must public safety be "sold" to the community at large.

Our selling plan was to explain our intention to all the organizations in the district. We talked at the Rotary, Kiwanis, Automobile Clubs, at the Chamber of Commerce weekly luncheon, to the teachers, the City Councils and 'Ministers' Associations. They all promised to assist us and when the week arrived they did do splendid work.

The program for the week consisted of safety sermons in the churches on Sunday, the Rotary Club allowed us to provide a safety speaker on Monday of the Safety Week, the Kiwanis Club on Tuesday, the Automobile Club held a special luncheon on Wednesday and the Chamber of Commerce on Thursday was a joint Safety and Boy Scout Day.

Each evening during the week mass meetings were held in the Armoury and were attended by workmen, business men and their families. We were a trifle nervous as to the outcome of these mass meetings because we did not know how the people would take to attending meetings for the purpose of listening to talks on how to prevent accidents. After the first meeting we were convinced that we were giving the people something they wanted and the large attendance each night gave us confidence for carrying out the program that had been made for the year.

If we had stopped at the end of the Safety Week our efforts might have been in vain because, even though we did not have a single serious accident or death during the week, safety work does not consist of a one week's effort but must be carried on all the year.

Shortly after our week we started the school of safety instruction. This school met twice a month in the Chamber of Commerce rooms and a man of authority on the subject for the evening gave a lecture on that subject. After the talk the meeting would be open for a general discussion and many valuable points brought out.

That the school was popular was evidenced by the fact that an average of 265 "students" attended. When we consider that these people, men and women, attended, regardless of weather or transportation conditions we know that any effort along organized safety is appreciated and well worth while.

The results to plants is direct and the manufacturers in the Border cities are now gaining the benefit. One hundred and sixty-five diplomas will be issued some time in May to the men and women who attended 5 per cent. of the lectures. In our plant we have twelve men who will receive diplomas, and while they are not all in positions of authority yet

they are safety men and carry on safety work along with their regular work. For example, the morning after the lecture on Goggles there were twelve men who had a first hand knowledge of why men should wear goggles at work, and they were all busy telling their fellow workmen about it. The demand for goggles was heavy that day and men are wearing them more regularly than before.

For next year we are planning to conduct the same school for beginners, an advanced school for the ones who have received diplomas this year, and also a school for truck drivers and automobilists. Also safety will be taken up as a part of the regular school work and taught to the children.

It can be taught to the children easily and they enjoy the lessons. You know it is as interesting for a child learning to read to have as a lesson a sentence like, "When I first cross the street I look to the left, and when I get to the middle of the street I look to the right," as the old one we learned years ago which went something like this, "I see the little red hen, the little red hen sees me." It teaches English just the same and also gives the child a lesson in safety that will never be forgotten.

We are firmly convinced that the answer to Accident Prevention in Ontario is educating the people to practice safety. We also believe that the best and quickest way to accomplish that result is to organize Local Safety Councils in each community.

Not necessarily with paid secretaries in each small town but good live organizations conducting schools and in otherwise boosting the work.

With local councils throughout Ontario we can come together at conventions of this kind and exchange ideas and methods and all be benefited.

A Plan for a More Effective Federal and State Health Administration

FREDERICK L. HOFFMAN, LL.D.

Third Vice-President and Statistician the Prudential Insurance Company of America

(Continued from the June issue)

MODERN METHODS OF HEALTH EDUCATION

It is possible on the present occasion to make only a brief reference to the suggested section on health education and health propaganda. The most serious objections lie against any form of ill-considered or superficial publicity, which while relatively rare, is nevertheless sufficiently common to suggest an urgent word of caution. A single serious error or ill-considered statement of advice is likely to do more harm to a health organization, whether Federal, State or municipal, than all the good attained through a mass of irreproachable public utterances. The utmost caution is called for and only what is of real value should emanate from a Federal or a State health department, irrespective of the public clamour during a period of exceptional excitement, such as all are familiar with who passed through the epidemic of infantile paralysis or the still more recent one of influenza.* There is nothing more menacing to a public health service than a publicity department which considers it its duty

*The danger of unwise publicity was never more forcibly illustrated than by the ill-advised action on the part of the Board of Health of the City of New York during the infantile paralysis epidemic of 1916. The public has a right to a statement of the facts and it is equally of right entitled to be protected against the dissemination of wrongful and misleading information, conjectures, theories and mere guesswork opinion on the part of those who are assumed to know. As well said in an editorial in the New York Sun (July 30, 1916) under the title of "A Panic in the Name of Sanitation", "We believe the authorities and particularly the Department of Health have contributed unnecessary hardships to the situation that exists and that if it does not make a radical change in its methods it will create in the name of sanitation a panic whose effects will be more terrible than anything the city has to fear from the mysterious disease to which attention is now given". Much the same criticism may be brought against the publicity mismanagement of the epidemic of influenza in the city of San Francisco, where a well-known writer on public health questions, with no thorough knowledge or understanding of the problem, urged in the most emphatic terms the universal use of the face mask on the one hand and of a but recently discovered vaccine on the other. Impartial investigations subsequently proved that the relative case rate and fatality have been lower in Los Angeles where the face mask was not adopted, and that in the opinion of the foremost authorities on vaccine treatment, no safe reliance can be placed upon the use of any influenza vaccine known at the present time, for either preventive or curative purposes.

to issue a continuous stream of bulletins, press notices, etc. It is absolutely unavoidable under such circumstances that, sooner or later, information or advice of an untrustworthy character is given publicly. The public has a right to be protected against the dissemination of ill-considered information or so-called "health news", which may be, and often is, seriously misleading or needlessly alarming. The field of health education has been enormously expanded during recent years, particularly through the co-operative efforts of health promoting agencies such as the American Public Health Association, the National Tuberculosis Association, the American Society for the Control of Cancer, the National Safety Council, the Association for the Prevention of Infant Mortality, etc. More active governmental participation in the work of these associations would materially aid in the highest attainable degree of success on the part of the Federal and State health administrations. In addition thereto, of course, the annual and special conferences of State and Territorial health authorities, under the auspices of the Federal health service, fulfill a most important function. There can be no thoroughly effective co-operation between Federal and State health authorities, unless the officials concerned know one another and know one another well.

Of the many national organizations and activities all of which are more or less in the nature of health promoting agencies, aside from those previously referred to, the following are of special importance: The Eugenics Record Office, Cold Spring Harbour; The International Health Board of the Rockefeller Foundation, New York; The American Home Economics Association, New York; the American Social Hygiene Association, New York; The American Social Hygiene Association, New York; The National Association for the Advancement of Coloured People, New York; The National Board of the Young Women's Christian Association, New York; The National Child Labour Committee, New York; The National Child Welfare Association, New York; The National Committee on Mental Hygiene, New York; The National Committee for the Control of Blindness, New York; The National Conference for Social Work, Chicago; The National Organization for Public Health Nursing, New York; The Playground and Recreation Association of America, New York; The Race Betterment Foundation, Battle Creek; The Red Cross Institute for Crippled and Disabled Men, New York; The Russell Sage Foundation, New York; The International Young Men's Christian Association, New York; The Association of Industrial Physicians and Surgeons, Boston; the American Posture League, New York, and The American Physical Education Association, Springfield, Mass.

There are, of course, a number of others, working, however, chiefly

in a more restricted field. Regardless of the viewpoint that there is much duplication of effort, the fact requires to be kept in mind that in what is practically a new branch of social work the strong initiative and the fixed purpose which lie back of each and all of these organizations are factors of the utmost importance in the attainment of early results of far-reaching value.*

MILITARY AND NAVAL HYGIENE

No extended reference to the self-evident co-operation of the Federal health service with the sanitary and medical departments of the Army and the Navy, as well as with the health authorities of our non-contiguous or insular possessions, seems necessary. It is a self-evident conclusion, of course, that such co-operation in the future should not only be more active, but should follow much more carefully considered lines, based upon our war experience, than has heretofore been the case. Whether it would be necessary to make special provision for such co-operation in a separate section is debatable. Any particular question arising could probably be taken care of by the section on health administration and organization, which should be made to serve all of the more or less general administrative and co-operative functions.

The military medical administration has naturally very much expanded in consequence of the war. Its general principles have therefore been much more carefully worked out, as a matter of necessity, than has been found essential or possible on the part of civilian health organizations. A clear distinction is drawn by Joseph H. Ford, M.D., Colonel, Medical Corps, U.S. Army, between the real administrative work of the Army medical organization, which is effected by orders, circulars, memoranda, letters of instruction, etc., and the reports and return, rendered to superior officers, which merely indicate to higher authorities how such methods have failed or succeeded. He properly points out a fact which is frequently overlooked, that reports are of less value than results, and he therefore strongly approves of a laudable disposition to simplify military official procedures, reducing letters, reports and returns to a minimum and replacing them as far as possible by man commands conversations and by frequent inspections. This observation must not be construed as an effort to minimize the practical value of reports intended to serve not merely the purpose of an accurate accounting of services rendered, but also as a basis for subsequent historical in-

*For a full discussion of the question of effective co-operation in line with the future possibilities of reorganized public health activities, see a paper on "The Present Condition of Public Health Organizations in the United States", by Prof. Selskar Gunn, American Medical Association, Chicago.

quiries, the practical value of which is best illustrated by the classical work of Charles Creighton, M.D., on the "Histories of Epidemics in Britain"; in fact, all epidemiological investigations rest largely upon historical inquiries and the intelligent analysis of a mass of involved statistical and other data.

Annual or special reports on health and mortality are frequently prepared by subordinates not sufficiently familiar with the facts, which require presentation as a matter of routine official procedure. The classical reports of Dr. William Farr, on the mortality of the people of England and Wales, owe their intrinsic and permanent value to the fact that they were the work of Dr. Farr himself and not of a subordinate. The same conclusion applies, for illustration, to the early reports of the State Board of Health of Massachusetts, particularly to those of Dr. Henry I. Bosw ditch and Dr. Samuel Abbott. The centennial discourse of Dr. Bowditch, on Public Hygiene in America, delivered before the International Medical Congress held in Philadelphia in 1876, still ranks as the most useful work of its kind accessible to the student of the public health administration of this country. Efforts at standardization and unification in the rendering of annual, monthly and weekly reports of Federal, State, and local health departments have heretofore failed entirely, and largely so because of the absence of a clear recognition of the practical utility of such reports when properly applied to the solution of the more pressing needs of sanitary administration. The tendency of recent years has rather been in the wrong direction and the reports now rendered are less useful than formerly and often unreasonably delayed in publication, if printed at all, as required by law. The public is of right entitled to a full accounting in all matters concerning the health administration of the community, in the same manner in which such an accounting is rendered by the military and naval branches of the Government. The work of Colonel Ford is an admirable presentation of practically all that concerns an efficient public health administration, including observations on the required co-operation with other governmental and civilian health agencies and organizations. The work also includes a reprint of the general regulations governing the sanitary administration of the Panama Canal Zone, issued originally under the authority of Major-General W. C. Gorgas.

ADEQUATE COMPENSATION OF HEALTH OFFICERS

Each and every section of the Federal, State and local health administration should be in charge of a person thoroughly qualified for the position, free from all political influence or interference. The technical sections or departments should be in charge of specialists of reputation as a guarantee of efficiency in service in matters which are not

generally within the full understanding of the public. The scale of salaries and allowances should be liberal, for if we are really in earnest in our assertions that the health of the nation is a matter of paramount concern to all the people, we must be willing to pay the price. In the long run a thoroughly well-paid and contented official staff will prove the best possible investment as a guarantee against the miscarriage of effort in a field of administrative activity in which failure may prove disastrous to the community.

An admirable analysis of the earnings of health officers and their respective employment on a part-time and on a full-time basis has been prepared for the information of the American Public Health Association by Dr. Lee K. Frankel, the president-elect of the association. Out of 417 health officers 48.76 per cent. earned less than \$1,000 per annum. Of the 417 officers making returns only 153 were employed full time, the remainder of 264 being employed part time and generally at salaries of less than \$1,000. Of the 417 communities represented by the inquiry 101, or 24.2 per cent., required the health officer to be a physician with public health experience; 170, or 40.8 per cent., physicians without public health experience; in 58 cases public health experience of a non-medical character was sufficient, and in 88, or 21.1 per cent., neither medical nor public health experience was considered necessary. There is therefore an abundance of room for improvement, on the one hand, in the raising of the technical qualifications for the status of a health administrator, and as a condition precedent there is the necessity for more adequate compensation as an inducement to entrance into a field which is now in a fair way of being recognized as a profession.

STATE HEALTH ADMINISTRATION IN CALIFORNIA

The question now arises as to how far such a plan as is here suggested, subject to change in matters of detail, would meet State requirements. In view of the wide variations in State health purposes certain modifications no doubt would be necessary, in some directions possibly an enlargement of the function suggested and in others a very material abridgement. In the main, however, the general plan and scope of the proposed organization should be found feasible of adoption by the several States, and of course, subject to further modifications, by the larger municipalities. The status of any Federal health organization will probably always remain chiefly advisory and corrective. This conclusion, of course, does not apply to international and maritime quarantines or to the hygienic laboratory or to research work. The real health *administration*, in conformity to our constitutional limitations, must, after all, remain, and properly so, a State or local function. By way of illustration, a very brief reference may be made to the State health

organization of California. While apparently the budget is fairly liberal, it is entirely inadequate to the purpose, considering the vast area of the State and the wide variations in local conditions and special needs. In the Sacramento Valley, malaria is a problem of the first importance, in southern California it is the indigent tuberculous patient, in the Mother Lode region it is miners' hookworm disease and possibly miners' phthisis, while in the city of San Francisco it is, in a rather restricted sense, of course, the problem of Oriental mortality, tropical diseases, leprosy,* etc. The state health organization rests upon a district system, which provides entirely inadequate financial resources, under a single health officer, for an area which may be larger than the combined territory of several New England States. Under the old conception of emergency service during epidemics, or sanitary after-care, the present method is probably as satisfactory as any. Under the proposed plan, however, the State would have to thoroughly reorganize itself and establish a health policy paramount to every financial, commercial or even sentimental consideration.

California offers at the present time the most promising field for far-reaching reforms in State and local health administration. California within the boundaries of a single state sovereignty includes practically all of the various environmental conditions which more or less determine both the average and the maximum duration of human life. The latitude is from 33° N. to 42° N. The area is almost 160,000 square miles, or equal to the combined area of the New England States, New York and Pennsylvania. The State has a Pacific coast line of nearly 800 miles and a range in elevation from sea level to 14,500 feet. The islands of California include the practically barren Farallons and others quite uninhabitable, as well as the beautiful and fertile Santa Cruz and Santa Catalina. The normal range in temperature is from 12° below zero to a maximum of 120° and more in the Death Valley. The range in rainfall is from 3 inches in the extremely arid region of the south to a maximum normal of 113 inches per annum in the extreme north. At San Diego the sun shines nearly every day throughout the year, but at Eureka the number of days with sunshine is only about 100. Wide variations are met with in wind velocity and the frequency

*Leprosy is of comparatively rare occurrence in this country, but apparently the disease is on the increase. It is, therefore, most gratifying that a congressional appropriation should have made the sum of \$250,000 available for the establishment of a Federal leprosarium, which, at the outset at least, is intended to care chiefly for cases of an interstate or international character. Leaving out of consideration the State of Louisiana, nearly all of the leprosy cases in this country have been contracted in foreign countries or in the non-contiguous possessions of the United States. Of all the transmissible diseases, leprosy is perhaps the one which, by common consent, is most entitled to Federal consideration, as a national health problem of the utmost serious concern.

of fogs. Seismic disturbances are common in some sections, and the State has the unique distinction of having the only active volcano in the United States.

California has practically every variety of soil from the most fertile to the absolutely unproductive. In the area immediately adjacent to San Francisco fifty different types of soil have been clearly differentiated, from the fertile sandy loam and adobe to dune sands, tidal marsh and river wash. Even more varied are the soil conditions in the great Sacramento Valley, the extreme length of which is approximately 150 miles. Seventy-three soil types have been identified in this area, ranging from widely varying loams and clays to tidal marsh, muck and peat. The relation of such soil variations to health and longevity and to special disease prevalence has thus far been only approximately determined and hardly to much practical purpose. The same conclusion applies to the wide range in the quality of surface and ground waters, although a large amount of useful information has been brought together on this subject in the water supply investigations of the U.S. Geological Survey. The same department has also issued a valuable report on the Springs of California, which emphasizes what is practically as yet an almost undeveloped natural resource of the utmost value in the more scientific treatment of disease.

The health promoting value of the California desert regions has not been made the subject of a thorough investigation. The extraordinary results attained in certain localities, as for illustration, at Indio, in the Colorado Desert, are suggestive of much more far-reaching beneficial results when the more or less involved facts of physiography, climate, geology, soils, etc., are better understood. As encouraging evidences of progress, attention may be directed to the reports of the Bureau of Soils on the Indio area and of the U.S. Geological Survey of the Ground Waters of the Indio area, with a sketch of the Colorado Desert and a supplementary report on "Some Desert Watering Places in Southeastern California and Southwestern Nevada", by Walter C. Mendenhall, Washington, 1909.

Aside from the important physical factors which more or less determine the health of the State, there is an equally wide range in the racial distribution of the population and its social and economic conditions. In some sections certain racial elements predominate, such as the Portuguese, the Mexican, the native Indian, the Chinese, the Japanese and even the East Indians and Koreans. All of these races have their own special obscure mortality problems and exceptional disease predisposition or resistance, as to which additional information would be of real value in the more scientific practice of medicine.

The range in the industries of California is extraordinary and in-

clusive of practically every important occupation involving special industrial hazards, such as the mining of every variety of metal, from gold and lead to copper and quicksilver, and of the non-metallic substances, from salt and borax to cement. There is every variety of lumbering, from the sugar pine forests of the high Sierras to the giant redwoods of the northern coast counties, with all the subsidiary wood-working industries, from ship-building to the manufacture of matches. The smelting industries are thoroughly representative, with all their peculiar problems of dust and fume control, not only of immediate concern to the employees, but also to the population at large living in areas adjacent to smelting plants. The Selby Commission may here be referred to as an excellent illustration of the scientific resources available to the Government when utilized on a thoroughly well-considered plan of co-operation with private interests.

The agricultural and horticultural development throughout the State includes every variety of local conditions, artificially modified where necessary by extensive systems of drainage and irrigation. No other section of the United States illustrates in such a remarkable manner the soundness of the conclusions advanced by the late Prof. George P. Marsh, in his treatise on "The Earth as Modified by Human Action", and from another viewpoint by Elsworth Huntington, in "Civilization and Climate". Only those who are familiar with the truly enormous natural obstacles to be overcome in effective methods of drainage and irrigation can realize the true significance of the new mortality problems which result from defects which at the outset are relatively insignificant, but which may prove serious in their ultimate influences on the life and health of the people. No other diseases better illustrate the force of this observation than malaria and typhoid fever.

California presents every contrast of riches and poverty and of physical well-being and chronic ill-health. For many years the State has attracted invalids from other sections, particularly those afflicted with tuberculosis and other chronic respiratory diseases. No other disease, unless it be leprosy, manifests more clearly certain important interstate aspects of Federal Health Administration. The investigations which have been made by Dr. Sweet of the U.S. Public Health Service on the problem of the indigent tuberculous patient in the Southwest may be referred to as evidence of an increasing interest on the part of both the Federal and the State health authorities in a problem the national importance of which has heretofore not been recognized.

In no other State, therefore, it would seem, are the conditions more ideal than in California to justify the undertaking of a thoroughly re-organized State Health Administration on the basis of new principles and inclusive of new functions essential to the attainment of decidedly

better results. No State is more progressive and more willing to meet the required expense to attain the highest ideals in the proper sphere and function of every branch of the State government. California has three great universities, adequate medical schools and clinical facilities, and numerous well-managed public institutions, all useful for the purpose of sustaining a thoroughly well-worked-out plan for a modernized health administration such as is here proposed.

How much has been achieved within a comparatively short period of time is best illustrated by the gratifying success of the State Land Colony at Durham, which in practically all the details of its administration rests upon the scientific advisory assistance of the University of California. This work which has been carried forward to such a successful termination by Prof. Elwood Mead, the distinguished authority on irrigation, gives every promise of serving as a model to other sections of the country, even though the plan may not prove feasible of universal adoption. What has thus been achieved in the realm of agriculture should be equally possible in connection with efforts to improve health and physical well-being. It is to be hoped that the executive officers of the State Land Colony will see their way clear to initiate a practical method of health supervision, including physical examinations, medical assistance and institutional treatment in conformity to all the knowledge available on these subjects at the present time. If this suggestion could be adopted the State Land Colony would only carry into further practical execution the method so successfully worked out in behalf of the students of the University of California, who for more than six years past have been under qualified medical supervision, which has been provided for at minimum expense, and without the pretense of social insurance, including all that must be considered essential to reasonable medical or surgical needs.

STATE HEALTH ADMINISTRATION IN NEW MEXICO

The State of New Mexico may serve as another illustration. At the present time it may safely be asserted that the State is not only without a State health organization, but not one of the principal cities or larger communities has a thoroughly satisfactory local health board. The registration of deaths is not enforced. The people of the State of New Mexico are of right entitled to a progressive health policy. The health of this State is not merely a matter of local but of national concern as well, as best illustrated during the recent epidemic of influenza, on the one hand, and the problem of the interstate migration of tuberculous invalids, on the other. There are numerous special problems, such as the effect of altitude on health and its relation to the treatment of certain diseases, the proper and more effective use of medicinal springs, the

morbidity and mortality of the Indian population, the special sanitary problems of the Mexican element, etc. None of these are receiving proper consideration at the present time. The State can not possibly hope to attract new residents proportionately to the practically unlimited opportunities for further economic development unless evidence is forthcoming of a well-considered State policy of a health administration more or less in conformity to the outline presented on the present occasion. The efforts which have been made by the New Mexico Public Health Association are deserving of the most liberal encouragement on the part of both the State authorities and the public at large.*

*A special report has recently been prepared on public health administration in New Mexico, by Dr. J. W. Kerr, Surgeon U.S. Public Health Service. This report is an admirable presentation of suggestions more or less in conformity to present-day conceptions of public health administration, as chiefly conditioned by restricted police powers of the state. The report, however, includes suggestions for the investigation, and control of diseases; the need for diagnostic laboratories, the sanitation of schools, public health engineering and public health educational work. The report concludes with the recommendation for the financial support of a State department of health limited to \$22,900, or on the basis of the present probable population of New Mexico equivalent to 5c. per capita. If the State of New Mexico were to begin with twice the sum, or, say, \$50,000 per annum, for the purpose of an adequate and really effective health administration, the resulting benefits to the people of New Mexico would be many times the amount suggested as a minimum by Dr. Kerr.

To be Continued.

The Red Cross in Nova Scotia

THE Nova Scotia Provincial Branch of the Red Cross Society of Canada is very rapidly carrying out its programme adopted in Nova Scotia last year in carrying out the Peace Time programme of the League of Red Cross Societies of the world.

On July 12th at high noon two great public health caravans, planning a tour of the province, left the Parade in front of the City Hall, under most auspicious circumstances. His Honour, the Lieutenant-Governor Grant and Mrs. Grant, His Worship the Honourable John F. Parker, Mayor of the City, Provincial Health Officer Dr. W. H. Hattie, representatives of the Massachusetts-Halifax Health Commission, of the Red Cross, and others, were present to bid the caravans Godspeed. Dean Lloyd of the Anglican Church, officially blessed the undertaking and then the seven Red Cross ambulances and a number of motor trucks and touring cars left the central section of the City for the Dartmouth ferry. Each of these public health caravans is equipped with educational moving pictures and lantern slides. The personnel consists of six doctors, a dentist and a corps of nurses. They will spend six weeks in reaching the coastal towns and fishing villages most in need of public health assistance and medical relief work. One of these caravans goes north-ward along the shore of Minas Basin, crossing thence to the shores of Northumberland Straits, and skirting the northern coast of the Province, passes through Antigonish, and on to Sydney, Cape Breton, thence to the extreme north of the Island. This caravan passes through a country rich in historic legend and second to none in Canada for its scenic beauty.

The caravan going south goes along the southern shore of Minas Basin, through the historic Evangeline country, by Grand Pre, south through Cornwallis and Annapolis valleys, the heart of the great apple belt, and through the municipality of Clare, where the descendants of so many returned Acadians dwell. This Caravan, after visiting the southern-most portion of the Province at Yarmouth county, returns to travel along the east coast, through Guysboro county, and finally ends the trip at Halifax. These routes are replete with historical suggestions. Grand Pre, home of Evangeline and the scene of the massacre of Noble's forces, Annapolis long the seat of the Government during the French occupation, Shelburne founded by the Loyalists and for a long time the rival of Halifax in wealth and population, Country Harbour founded by a Caroline regiment and connected in tradition with Flora MacDonald dear to the Scottish memory, St. Peters the home of Nicholis Denys

one of the most noted of the old French pioneers, Louisburg which in its prime fell to the Massachusetts militiamen; these places and many more which have experienced war's ravages, or owe their existence to war's exigencies, will now be visited by these Red Cross caravans on their magnificent peace time programme.

These public health caravans are easily the largest travelling clinics and educational exhibits that have been utilized anywhere in the world, and for Nova Scotia to have undertaken such a work indicates a great awakening to the value of public health effort. Particular appreciation must be expressed for the Red Cross which have not only encouraged the movement by every assistance their organisation permits, but have provided the funds which made it possible. The visit of the caravans is bound to have a great effect in stimulating public health interest throughout the Province of Nova Scotia, where the value of this work has perhaps before never been fully realized.

Social Background

Poverty and Malnutrition*

JOHN C. GEBHART

Association for Improving the Condition of the Poor, New York

IN the popular mind poverty and malnutrition are closely associated; indeed to many, the terms are practically synonymous. Among public health authorities and social workers, however, who are attempting to deal constructively with the defect, one finds a wide variety of opinions as to the role played by poverty. But most of the differences of opinion appear, on analysis, to be due chiefly to a different understanding of the term, poverty. Those who regard poverty as of slight importance use the term in its narrowest sense of meaning an inadequate and unsteady income; on this premise they logically conclude that poverty is responsible for the defect only so far as it results in an inadequate supply of food. Those who regard poverty as a major, if not the chief, cause of malnutrition use the term to embrace all the usual concomitants of poverty, bad housing conditions, a low standard of hygiene, inadequate provision for sickness and even ignorance itself. It is quite obvious that of the term is used in this larger sense, poverty must be given an important role.

The larger use of the term is the one which describes poverty as we know it and as we deal with it from day to day. By poverty most of us understand the whole vicious circle of living which originates in an inadequate income and leads back to the same condition. The poor are the underfed, the overcrowded, the sick and the ignorant. Their underfeeding, congestion, ill health and ignorance again tend to keep them on the same economic level or to plunge them even deeper. It is difficult even for purposes of analysis to break this vicious circle at any point and isolate the various factors. Using the term in this sense, we shall attempt to discover first, whether as a matter of fact malnutrition is more prevalent among the poor than among the well-to-do; second, to what extent the evil is due merely to an inadequate food supply and to ignorance, ill health and other factors which are themselves the result of inadequate and unsteady income.

*Reprinted from Proceedings of National Conference of Social Work.

MALNUTRITION MORE PREVALENT AMONG POOR CHILDREN

The comparison of the growth of large numbers of children of different economic status is a fair index of the relation of poverty to under-development and malnutrition. In this connection the comparison of the heights and weights of school children of Glasgow compiled by Mr. Arthur Greenwood is most significant. His study included 72,857 boys and girls whose ages range from five to eighteen. His findings are the more pertinent in that the factor of racial differences is practically eliminated. The children are divided into four groups on the basis of economic status. Group I as composed of children from "schools in the poorest districts of the city"; group II, from schools in the "poor districts"; group III, from "schools of the better class" and group IV from "schools in districts of a still higher class."

The contrast between the two extremes is most striking but the same variation is found to supply between the children of the same age in each group. The weights of the children in group I, the poorest group, range from six to eleven per cent less than those of group IV, the most prosperous group. In other words, the poorest children are about one year behind the well-to-do in their growth. The difference in height is less striking, ranging from four to six per cent in favor of the more prosperous children. Indeed, the growth of the children at every age varies according to economic status with such mathematical certainty that we are found to conclude that the economic factor is a constant one in determining the growth of children.

Unfortunately no similar comparison has been made of American children. The comparison, however, of the heights and weights of 60,000 school children as compiled by Dr. Burk and Professor Boaz with the 30,000 recorded by Professor Baldwin reveals the same tendency. The Burk-Boaz measurements were made of average children attending public schools in various American cities while Baldwin's measurements were exclusively of those attending expensive private schools. The average curves of growth is from two to ten pounds higher for the private schools children,

The number of children fed under the English school feeding act is a clear indication of the effect of increased income on malnutrition. In England, ninety per cent of the school meals are furnished to "necessitous" children, i.e., children whose malnutrition is due to inadequate income. The reports of the chief Medical Officer of the Board of Education of England shows that during 1914-15, the first year of the great war, the total number of meals served was 29,569,316; and that in the year following, 1915-16, it had fallen to 9,930,074; and in 1916-17 only 5,781,504 meals were served. The Chief Medical Officer ascribes the great decline in the number of meals served to the fact that because

of increased wages and steady work in war industries and regular government allotments to soldiers, for the first time in their lives great sections of the working population had sufficient income to feed their children properly.

Such broad surveys prove beyond the peradventure of a doubt that not only is poverty largely responsible for malnutrition, but that the two are in direct ratio. While most of us would accept this statement as self-evident, there are many, among them workers in the field of nutrition itself, who attach only slight importance, if any, to poverty as a cause of this defect. One physician who is doing excellent work on the nutrition problem states categorically that malnutrition is more prevalent among the rich than among the poor. If such misconceptions are allowed to go uncorrected, the effect will simply be to delay the advent of an effective program for dealing with this defect.

EFFECT OF LIMITED INCOME ON FAMILY FOOD SUPPLY

For the purpose of a clear analysis of the subject, so essential to dealing effectively with it, we must determine as clearly as possible just what elements in the standard of living of underpaid groups work most havoc to their nutrition. The interrelation of the various factors makes this a most difficult task. The experience of workers in daily contact with such groups has, however, cleared the field of much of its obscurity. Rowntree's study of poverty in York, England, in 1900 and Chapin's exhaustive work in the Standard of Living in Workingmen's Families in New York City in 1907 are of invaluable service to us here. The method pursued by these workers and their general conclusions are so familiar to social workers as to need no elaboration here. I want simply to recall to your minds what these studies show with respect to the effect of an inadequate income on the food supply of families falling under their notice.

Rowntree analyzed the dietaries of his families with respect to the food requirements laid down by Chittenden and Atwater for men engaged in various pursuits. We shall have to be content with a mere summary of his conclusions. He found that among the middle class there was more than an adequate supply of food; that among well-to-do artisans there was on the whole an adequate food supply, but that among the laboring class there was a seriously inadequate food supply. His study further showed that among the laboring group the dietary was, on the average, twenty-five per cent below that which is deemed essential.

The work of Chapin made a similar contribution and one which strikes nearer home. The weekly dietaries of the families studied were

submitted to Dr. Frank P. Underhill, a food expert of Yale. The families were classified according to their annual income, which ranged from \$400 to \$1,100 and over. His results are summarized as follows:

Income	Total No. of Families	Underfed Families (22 cents per man per day and under)	
		Number	Percent
\$ 400 to \$ 599	25	19	76
600 to 799	151	48	32
800 to 899	73	16	22
900 to 1,099	94	8	9
1,100 and over	48	0	0
	391	91	23

Thus it will be seen that among the lowest income groups—those earning from \$400 to \$600 a year, seventy-six per cent were underfed. The percentage of families underfed declines as the income is increased until in the group earning between \$900 and \$1,100 only nine per cent were underfed and in the group receiving \$1,100 or more none were underfed.

Dr. Chapin's study showed that in 1907 between \$850 and \$900 was necessary to support a family of five in health and efficiency, provided the income were laid out with unusual foresight. Of the group actually receiving this amount twenty-two per cent were underfed. In other words, it is not until the families are well above the margin necessary for subsistence that an adequate food supply is assured.

Both of these studies clearly indicate that when families are near or below the poverty line the tendency toward underfeeding and hence malnutrition is inevitable. To what extent, however, the food inadequacy is due to a lack of income and to what extent it is due to improvidence, ignorance and other factors, we are not enlightened. A recent study made by Miss Lucy Gillett, formerly of the New York Association for Improving the Condition of the Poor, and Professor Sherman of Columbia University is the first contribution to this phase of the subject.

The family dietaries of ninety-two families were examined, classified and rated by these experts. With respect to the amount of money spent, the families were grouped into four classes of twenty-three each. The amount of food provided in each case was considered not simply from the point of view of its caloric value, but also from the point of view of the balancing of the various elements on the dietary. The following table indicates in general, the food value which the average family in each group was receiving:

Group	Cost Cents	Calor- ies	Protein Grams	Phosphorus Grams	Calcium Grams	Iron Milligrams
I.....	19.2	2043	78	1.14	0.51	12.1
II.....	28.2	2665	91	1.39	0.64	14.8
III.....	34.7	3106	109	1.60	0.72	17.7
IV.....	49.4	3889	126	1.95	1.01	20.6
Standard allowance	2500-3500	75	1.44	0.69	15.0	

The dietaries of groups I and II who were spending 28.2 cents per man per day or less were deficient not only in energy but in all of the mineral elements essential to growth and a sound physique, phosphorus, calcium and iron. But the dietaries of groups III and IV who were spending from 28.2 cents to 50 cents per day were generally not only adequate in energy value, but were well balanced. Their work bears testimony to the tendency frequently noted in close work with such families, viz., that where the family's budget is limited an inadequate food supply results. Families living on an inadequate wage attempt to distribute the income proportionately to cover the various essentials. In order that rent, clothing and other needs may be cared for, it is, of course, imperative that the food supply should suffer. The study further shows that not only are such dietaries inadequate with respect to the total caloric value, but that where economic resources are limited a proper balance is more likely to be lacking.

INADEQUATE INCOME LEADS TO BAD FOOD HABITS

The authors found that in many cases where the amount of money spent for food was obviously inadequate a better distribution of food could have been secured for the same outlay. Most striking of all was the scant allowance for milk, fruit and vegetables which in many cases could actually have been increased without sacrificing the energy value of the diet and for the same outlay of money. In other words, a considerable number of families suffered from a combination of two evils, an inadequate income and an ignorance of food values. When it is considered, however, that an adequate working knowledge of food values is possessed today by only a very limited group of educated people, we can afford to be charitable in our judgment of a group who because of economic suppression are totally deficient in such knowledge.

Though less tangible, the evidence is no less real that a state of continued economic deficiency has the effect of establishing unfortunate food habits which persons of fair or ample means seldom acquire. In most worker's families the meals are prepared chiefly in the interest of the bread winner, the needs of the children being regarded as of secondary importance. During the day the children are mainly supplied with left-overs from the main meal or are given "pieces" which temporarily

assuage their hunger but which do not always contain the elements necessary for their growth. In this custom there is perhaps at work a primitive economic instinct to preserve the health and vigor of the bread winner in whom they are dependent. The great misfortune of such a custom is that the needs of the growing child, which from the social point of view are quite as essential, do not receive proper consideration.

Another unfortunate tendency among families of limited economic resources is to regard certain foods as luxuries after the commodity has reached a certain price. This is particularly true of milk and was brought forcibly to our attention during the recent unprecedented rise in the cost of this important food.

During the summer of 1917, the New York Health Department and the New York Association for Improving the condition of the Poor through Miss Gillett made a survey of the effect of the rise in the cost of milk from nine cents to fourteen cents a quart on the milk supply of twenty-one hundred families living in the poorest districts of the city. Only families with at least two children were considered, for it was obvious that any curtailment in milk consumption would have its worst effect on such groups. It was estimated by Miss Gillett that these families required 8,149 quarts of milk daily. In 1916 these families were actually receiving 4,797 quarts daily, more than half the required amount; but in 1917 they were purchasing only 3,193 quarts daily, a little more than a third of the required amount. The number of families getting less milk was 1,480, about seventy per cent of the total number. Most of these families reduced their milk supply from twenty-five to seventy-five per cent, while 121, nearly ten per cent eliminated milk entirely. Of the 1,480 families buying less milk, 1,213 were substituting tea and coffee.

The effect of the increase in the price of milk, which incidentally was less marked than in the case of other commodities, had a most serious effect upon families of limited means. It was at that time the verdict of the Health Department that the curtailment of milk consumption throughout the city had a marked effect upon the death of infants from summer complaint and on the nutrition of all growing children.

The New York Association for Improving the Condition of the Poor undertook recently to assist families of limited means to secure good milk at lower prices by selling at one of its food stores loose or dipped milk. While the price was ten cents a quart, eighty quarts of milk were sold daily, but when the price rose to eleven cents, the sales fell to forty quarts daily. This is simply added testimony to the fact that in families of limited means this important food, after it reaches a certain price level, is put in the class of a luxury rather than remaining in the class of an essential where it properly belongs.

POVERTY LOWERS OTHER STANDARDS

But defective nutrition is due not merely to a lack of food or to an improper selection of food. Clinical experience with undernourished children indicates that an unregulated diet, bad hygienic habits, uncorrected physical defects, such as diseased tonsils and adenoids, chronic indigestion and other ailments, prevent children from making normal gains. Here, we are in a twilight zone. It would be far from the truth to assume that such conditions, springing as they usually do from neglect and ignorance, are found only in the families of the poor. There ought to be no doubt, however, that they are more prevalent among economically submerged families than among those of adequate income. Inadequate provision for medical care, overcrowded and unsanitary apartments are, however, in most cases the result of insufficient income and these conditions are responsible for many of the physical ailments and defects which have an unfavorable effect on the child's nutrition. Chapin found that in families whose income was less than \$800 a year the provision for medical attention was inadequate. So clearly is this inadequacy recognized that the program of health insurance whereby industry, the community and the worker himself each share the cost of this service, is recommended by most social workers who are at all familiar with the problem.

The housing standard of the family, which have obviously close bearing on its physical condition, are almost entirely the result of economic pressure, though of course ignorance and shiftlessness play their part. Several English studies have indicated that malnutrition increases in a direct ratio with over-crowding. By this, we must not be led into believing, however, that over-crowding is in itself solely responsible for the poor nutrition of such children, but rather we must regard the over-crowding as an index of the poverty of the family which in turn is largely responsible for this poor nutrition.

So far as poverty both directly and indirectly is the cause of malnutrition the logical step is the improving of the economic resources of all members of the community who are now unable to maintain an adequate standard of living. Various reliable estimates are available as to the annual income necessary to provide a minimum standard of living consistent with health and efficiency. The careful work of Chapin led to the rather general acceptance of the standard which he deemed essential. His conclusion was that an annual income of between \$850 and \$900 was necessary to support a normal family of five individuals decently. In the twelve years that have elapsed since that estimate was made, however, the cost of living, according to the most conservative estimates of the United States Department of Labor have risen at least eighty per cent. Translated in present day terms this would mean that the minimum living cost for a normal family is between \$1,500 and \$1,800.

CURRENT RISE IN WAGES AND GENERAL STANDARD OF LIVING

The question has frequently arisen within the past three or four years in view of the unusually increased wages, as to whether the standard of living of workingmen had actually improved during the period of the Great War. The estimated of the United States Department of Labor would indicate, however, that real wages, which represent nominal wages divided by the cost of living, have made little if any advance and that in many industries they have actually decreased. According to the Labor Department of New York State, during the greater part of the Wars 1917 and 1918, the average weekly earnings in New York factories have not kept pace with the rise in the cost of food. The indexes of food costs and labor costs did not meet until February, 1919, and since that date there has been a slight gain of food costs over wages.

We must not, therefore, be too optimistic when we hear of carpenters getting \$6.00 a day where formerly they got \$3.50 and \$4.00 a day. This an increase of fifty per cent in wages, while the living costs have increased since 1914 eighty per cent. In spite of the fact that such workers are securing larger wages than they ever received before, they are inadequate to keep pace with living costs. Their economic condition is no better than it was before the war.

There is considerable indication, however, that in the skilled trades, particularly those which are well organized, there has been a definite gain of wages over living costs which ought eventually to result in an actual rise in the standard of living among these groups. Among the more poorly paid groups the great class of unskilled workers, increases have not been so marked, but of course, living costs have risen at the same rate with them as with other groups.

I realize that there is little which the members of this conference can do to raise the general economic standard of the community. As citizens, however, they can do much in insisting on the rights of labor to organize for their own protection and to bargain collectively for the price of their labor. As citizens and as social workers they can insist on adequate provision for the education of children and on social insurance to protect the workers against illness, accident, death and old age. As social workers they can make all their schemes for immediate aid fit into the larger plan for the complete economic adjustment of all classes toward which all democracies are striving.

I should not wish to appear, in stating the problem as I have, to discourage the various educational and public health programs which are now being directed to the problem of malnutrition. Nutrition clinics for the medical supervision of children who are so badly under-nourished as to require medical care, facilities for the removal of physical defects which retard nutrition, nutrition classes run both in connection with

nutrition clinics and with the public school, medical inspection of the school children, the work of the dietitians in collaboration with relief workers—all these movements are sound and are destined to make telling attacks upon those elements of the nutrition problem which are retarding so many children in their growth. The New York Association for Improving the Conditions of the Poor has itself been a pioneer in this kind of work. It has a staff of dietitians who are carrying over the families under its care the elements of practical food economy. In one section of the community where it is doing an intensive piece of community health work it is now operating five nutrition classes and plans are being made for the "nutritional guidance" of all under-nourished children of whatever age, who are discovered through its clinics and nursing staff.

Our brief survey has shown that a long period of economic insufficiency has the effect not only of reducing the food supply but in establishing food habits and hygienic standards which themselves militate against the nutrition of growing children. Even if it were possible to assure a competency to every workingman's family a great amount of work would still need to be done in the caring for physical defects and in inculcating an elementary knowledge of food values among the various groups of the population, particularly among those who have not had the advantage of acquiring such knowledge. The task of improving the economic conditions of all our workers and of combatting the ignorance and apathy which now handicap them, must go hand in hand. The greater task, that of raising the economic standards, will in all probability not be accomplished for many years, perhaps for a generation or two. The application of the other intensive work can be applied immediately. Real progress will not be made unless all of the factors in this problem are kept clearly in mind and unless in providing for the immediate remedies we do not lose sight of the great economic adjustments which are necessary to make possible adequate living standards among all elements of the population.



The Provincial Board of Health of Ontario

Venereal Diseases reported by Provincial Laboratories, June, 1920

Syphilis.....	169
Gonorrhoea.....	34
Chancroid.....	Nil.

Cases and Deaths of Communicable Diseases reported by Local Boards of Health for the Month of June, 1920

COMPARATIVE TABLE

<i>Diseases</i>	June, 1920		June 1919.	
	<i>Cases.</i>	<i>Deaths.</i>	<i>Cases.</i>	<i>Deaths.</i>
Small-pox.....	349	0	68	2
Scarlet Fever.....	371	12	310	6
Diphtheria.....	342	45	273	27
Measles.....	3,613	22	104	0
Whooping Cough.....	151	15	63	2
Typhoid Fever.....	31	12	22	7
Tuberculosis.....	220	184	228	183
Infantile Paralysis.....	2	1	7	5
Cerebro-Spinal Meningitis.....	..	9	4	4
Influenza.....	39	29	}	165
Influenzal Pneumonia.....	..	10		
Acute Primary Pneumonia.....	..	260		
	<hr/>	<hr/>	<hr/>	<hr/>
	5,118	599	1,079	401

Venereal Diseases reported by Medical Officer of Health

	June 1920.	June 1919.
Syphilis.....	169	108
Gonorrhoea.....	183	184
Chancroid.....	4	10
	<hr/>	<hr/>
	356	272

NOTE:—3 deaths from Syphilis.

The epidemic of measles the Province has had for the last six months is on the increase. The 3,613 cases reported for June are the second greatest number recorded in any month with the exception of the month of March 1916 when the cases at that time were over 5,000 with 47 deaths. It is satisfactory to know, while the cases for June is the greatest for any month this year the deaths are only 22 compared with the previous month when 46 deaths occurred out of 2,264 cases.

Small-pox is again on the increase in the Province, as indicated by the reports made by the Secretaries of Local Boards of Health. In the month of April there were 305 cases—May 290 and June 349 with no deaths.

Diphtheria cases reported show a decrease of 32 with one death less than for May.

The reports of Scarlet fever gives 12 fewer cases with 2 more deaths.

The Provincial Board of Health has lately felt that all cases of venereal diseases have not been reported. It is thought that this is due partly to carelessness by the medical profession and partly to some of its members not being familiar with the regulations concerning these diseases. It is extremely important that all cases of venereal diseases should be reported. The Board intends to establish clinics throughout Ontario for the treatment of these diseases and unless fairly accurate figures concerning their prevalence are obtained the establishment of such clinics will be seriously hampered. For the information of those medical men who are not familiar with the regulations the Board desires to state all cases of syphilis, gonorrhoea and chancroid are reportable by number though not by name on special printed forms supplied by the Provincial Board. Every local medical officer of health should have these forms available. Each case should be reported to the local Board of Health by serial number as soon as a definite diagnosis is made. The Provincial Board should be notified weekly by the local Boards of Health. It is only by the closest co-operation between the medical practitioners, the local Boards of Health and the Provincial Board of Health that accurate figures can be obtained.

News Items

To encourage study of the means for the prevention and cure of tuberculosis, the Hennepin County Tuberculosis Association of Minneapolis, Minn., announces that it has set aside a fund for the support of a tuberculosis research fellowship in the Graduate School of the University of Minnesota. The candidate for the fellowship must be a graduate of a Class A medical college. He will be expected to devote himself to research in some problem concerned with the causes, prevention, or cure of tuberculosis. No teaching or other service will be required. The fellowship yields \$750 the first year and progressively increasing amounts to be appropriated for the second and third years as conditions warrant. Inquiries and requests for application blanks should be addressed to the Dean of the Graduate College, University of Minnesota, Minneapolis, Minn.

Dr. D. A. Craig, for five years medical superintendent of the Queen Alexandria Hospital, London, Ontario, and during the war consultant in diseases of the chest for Military District No. 1. of the Canadian Army, has been appointed tuberculosis examiner by the Massachusetts-Halifax Health Commission, and on the 15th inst; took up his residence in Halifax.

Dr. Craig will give his entire time to tuberculosis work and in other educational phrases of public health contemplated by the Massachusetts-Halifax Health Commission. He will supervise the three tuberculosis clinics being organized in the Health Centres and serve as a free tuberculosis consultant to physicians in Halifax and Dartmouth.

The Executive Officer has also announced the appointment of Dr. Gordon Wiswell as the physician to be immediately in charge of the pre-natal, baby, pre-school age and malnutrition services in Health Centre No. 1, now conducted in Old Admiralty House; and of Dr. Hugh W. Schwartz as the physician immediately in charge of the nose and throat services. Dr. M. J. Carney, who organized the first tuberculosis clinic in Halifax, will continue in charge of at least one of the Health Centre tuberculosis clinics.

The Commission recently announced the names of a consulting staff, who will co-operate with Dr. Royer, the Executive Officer, in determining the policies in Health Centre work. Their names are as follows:—Col. John Stewart, Dean of Dalhousie Medical School, Dr. Frank Woodbury, Dean of Dalhousie Dental School, Dr. Arthue Birt, Dr. George M. Campbell, Dr. S. J. McLennan, Dr. R. Evatt Mathers.

Miss Voilet Trench, a well-known member of the panel of lecturers for the British National Council for Combating Venereal Diseases was a guest of honor at a luncheon organized in Toronto on August 3rd by the Canadian National Council for Combating Venereal Diseases. Miss Trench described the progress of the attack on venereal diseases in Great Britain and in describing her own work put a great deal of emphasis on the necessity for undertaking social and educational methods of a constructive sort.

Dr. J. G. Fitzgerald, Honorary Advisor to the Red Cross Society for Canada has returned from a trip through the Western provinces where he addressed numerous meetings organized by the Red Cross on the subject of "The Peace Time Programme of the Red Cross".

At the Annual Meeting of the Canadian National Council for Combating Venereal Diseases, held in Vancouver in June, various important amendments were made to the Constitution making it possible to undertake campaigns for members on a small fee basis. In future all Provincial Chairmen will be members of the Executive Committee. Newly elected members are Dr. J. A. Baudouin of Lachine, Quebec, and Major Fred. Smith of Toronto. Provincial Committees have been organized in Alberta, Saskatchewan, Manitoba, Ontario and Nova Scotia while it is understood that in the remaining provinces committees are in process of formation.

The continuance of the work of the Canadian Red Cross Society as a peace-time organization, in accordance with Article 25 of the Covenant of the League of Nations, "for the improvement of health, the prevention of disease, and the mitigation of suffering throughout the world", has made it necessary to re-organize the staff of the Society.

Lieut.-Col. Noel Marshall, who has devoted all his time to Red Cross work since the outbreak of war, remains as Chairman of the Central Council, resigning his position as Chairman of the Executive Committee. Mrs. H. P. Plumptre, who acted as Honorary Secretary throughout the war, has given up that position to devote her time to the development of the Ontario Division.

Dr. James W. Robertson, of Ottawa, has been appointed Chairman of the Executive Committee, and Dr. Albert H. Abbott has been appointed General Secretary.

The Peace-time work of the Red Cross Society will be, as the above quotation from the Covenant of the League of Nations indicates, in connection with public health. The Society will act in the closest Co-operation with the Provincial Departments of Health, and will supplement the activities of these Departments where it is considered advisable, at the same time maintaining its standing as a purely voluntary organization, in no sense subordinate to Government agencies. As a beginning in this service, Professor J. G. Fitzgerald, of the University of Toronto, has been appointed Honorary Adviser on Public Health, and Dr. Ruggles George has been appointed Director of Information on Public Health.

Editorials

The Abolition of Franking Privileges

THE announcement that in the very near future all franking privileges now enjoyed by the Provincial Boards of Health in Canada will be done away with is of more than passing interest to public health workers. Franking privileges have in the past covered the mailing of a variety of returns. Examples are forms from physicians to Division Registrars and from householders reporting births and deaths, returns from clergymen reporting completed marriage licenses and from Division Registrars covering marriages, returns to Medical Officers of Health and Municipal Clerks, reports of physicians notifying communicable diseases including Tuberculosis and Venereal Diseases, reports of burials by undertakers—as well as the transmission of the aforementioned reports to the Dominion Bureau of Census of the Dominion Government. With the exception of annual reports all franking is upon material which under arrangement with the Bureau of Census and the Dominion Department of Health are supplied to these respective Departments of the Federal Government.

The abolition of franking privileges upon the foregoing class of reports will in the opinion of the Public Health Journal be followed by disastrous consequences. The services given by physicians, clergymen, division registrars and undertakers is almost entirely voluntary and it would seem absurd to even try to compel the payment of postage in addition. Such an attempt will simply result in an immediate damage to the entire machinery of reporting which will be difficult to repair. The Provincial Boards, the Dominion Bureau of Census and the Dominion Department of Health will feel the immediate results. A disturbance of public health machinery, however, ultimately reacts on the people and this is the serious part of the matter. It is to be hoped that every step will be taken to persuade the Dominion Government that the contemplated action is absolutely without justification.

Public Health Education at Dalhousie University

IN connection with a campaign for funds to enlarge and extend the activities of Dalhousie University, the University authorities have been greatly encouraged and gratified by the announcement of gifts of a half million dollars each from the Carnegie Corporation and the

Rockefeller Foundation. These magnificent contributions are for the medical school of the University, which has been bravely carrying on in the face of many difficulties, and rendering a service to the people of the maritime provinces which would have been quite impossible were it not for the unrewarded devotion of the greater part of its teaching staff. The generous gifts which have just been received will permit the University to enlarge greatly the laboratory facilities of the medical school, to increase considerably the number of full-time teachers, and otherwise to strengthen the course in medicine. This in itself will be a distinct gain for the cause of public health in the province by the sea, as the more thorough the training of physicians the greater will be their success in conserving life and health.

It is, however, of particular interest to public health workers that a joint memorandum of the donors indicates very clearly that the University is expected to stress the teaching of public health, and it cannot be doubted that this evident wish of the donors will be fully met. Dalhousie has already inaugurated a course in public health nursing, open only to graduate nurses of good education and training, for which a very complete and practical curriculum has been laid down. This may be taken as an assurance that the University has already committed itself to a broader consideration of the health needs of its constituency, and doubtless a course leading to the D. P. H. will eventually be established.

The Dalhousie medical building is immediately adjacent to a singularly compact group of hospitals—the Victoria General, Children's, Maternity, Civic Infectious and (in course of construction) Tuberculosis—and also to the City Home, where numbers of persons suffering from chronic ailments are always to be found. When a proposed new structure, specially designed to serve as out patient departments to these various institutions, and also as a health centre in the broadest sense of the term, has been added to this group, and when the laboratories have been extended on accordance with present plans, Dalhousie will not only have unusually good facilities for clinical teaching but very exceptional opportunities for the most practical kind of instruction in public health work. The future of both curative and preventive medicine has thus been made extremely bright for the maritime provinces, and we confidently predict that a very few years will witness the development of a centre of medical education in Halifax which will rank well with similar centres elsewhere. A new day has dawned for public health work in the eastern portion of the Dominion, and all who are interested in this phase of human betterment will keep a keen eye upon the progress which will be made under the stimulus of these splendid benefactions.

Book Review

To-day's World Problem in Disease Prevention—Syphilis and Gonorrhoea, by John H. Stokes, A.B., M.D., Chief of the Section of Dermatology and Syphilology, the Mayo Clinic, Rochester, Minn., Assistant Professor of Medicine, Mayo Foundation Graduate School, University of Minnesota.

This book by Dr. Stokes is probably the most remarkable book as yet produced on the subject of venereal diseases. Written during the war at the instance of the Council of National Defence of the United States, it has been published for educational purposes by various State Boards of Health, and recently has been published and distributed to physicians and public-spirited laymen by the Provincial Board of Health of Ontario as a part of its campaign against venereal diseases.

Dr. Stokes combines scientific knowledge with a strong social point of view to an unusual degree. Known widely for his academic and clinical qualifications, he writes with accuracy and charm as well as an enthusiasm which will do a great deal to interest readers throughout the country in venereal diseases as the greatest of all public health problems.

The part of the book dealing with the more definitely medical aspects of the problem will repay the perusal of any physician. At the same time, even this section of the book is written in such simple language that anyone should be able to understand the essential facts of the disease from the standpoint of either prevention, prevalence, infectivity or cure.

The chapters dealing with the social, psychological and economic background of syphilis and gonorrhoea are full of facts of the greatest interest not only to physicians, but to the economist, the sociologist, the psychiatrist the legislator and public spirited layman alike. Chapters in this section deal with the public viewpoint, normal ideals of sex life—abnormal checks on marriage—the trend of the times towards laxity—the influence of the war—prostitution—alcohol and the genital infections, moral and educational prophylaxis—public health control—personal prophylaxis, etc.

To quote from the preface: "There is no device known to a cruel, unscrupulous and implacable opponent which has not been used against us by the twin scourges. They have crept into our

houses and murdered the innocent and helpless. They have appeared to many a sincere well-wisher of mankind not in their true semblance of brutal, wanton and savage mutilators and destroyers, but in the disguise of well-wishers, guardians of the moral life, painful but just chasteners of iniquity. Many a sincere but uninformed or unthinking man or woman has shuddered to think that these things must be, and yet feared to protest against them, refused even to know about them, lest with one horror removed or explained away, they should confront a worse one. We have lived the nightmare of one who dreams that his awakening will be his death, and dares not open his eyes."

But we need not continue. Dr. Stokes is right. The only advice the reviewer can give to the readers of THE PUBLIC HEALTH JOURNAL, who has not read this book, is to procure it at once and read it from cover to cover. If, when this task—if task one can call it—is completed, he is not at once enlisted as an enthusiastic recruit in the campaign against venereal diseases prepared to carry on to the bitter end—well—to say the least, the aforesaid reviewer misses his guess.

G. B.

